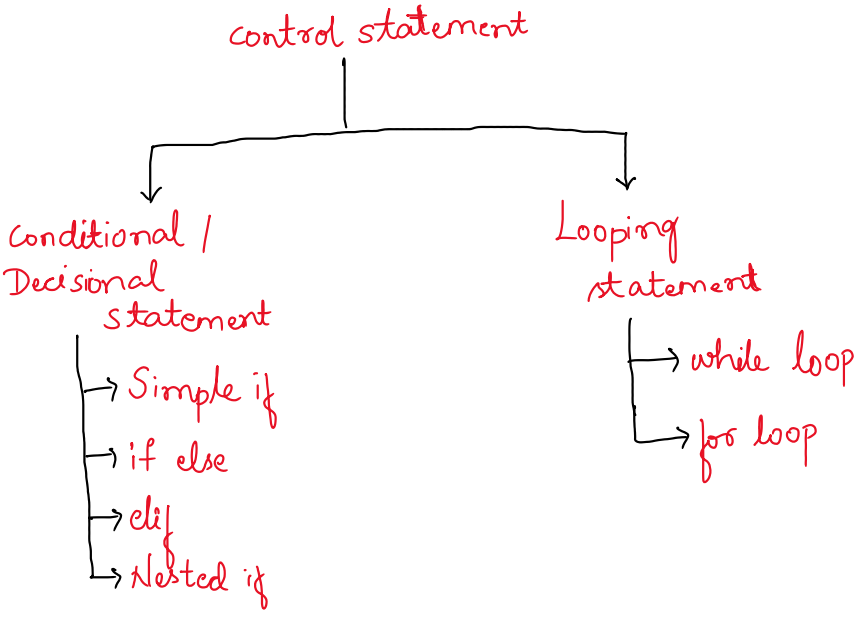
# Day-16

## Control Statement:

--- It is used to control the flow of execution.

**Types:**



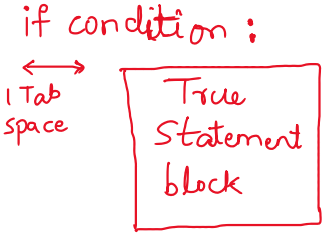

## Conditional Statement:

--- It is used to control the flow of execution based on conditions.

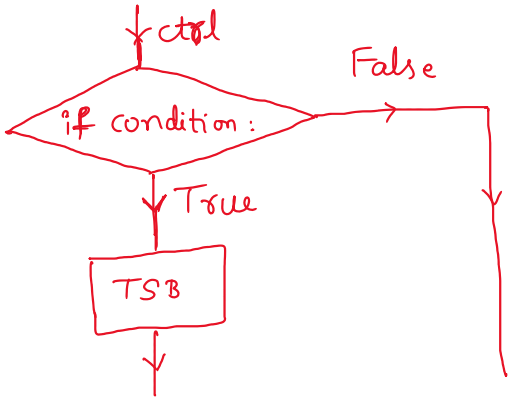
### 1) Simple if:

--- It is a keyword which is used to check the condition and it will execute the statement block if the condition is True or else it will ignore the statement block.

**Syntax:**




**Flow diagram:**




**Programs:**

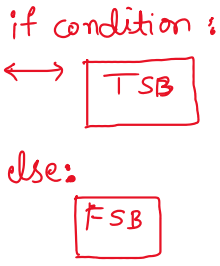
```
# Simple if

# WAP to check whether the number is even.
'''
n = int(input('Enter the number: '))
```

```
if  n%2 == 0:
   print('number is even') '''

# WAP to check whether the string has exactly 5 characters in it.
'''
s = input('Enter the string: ')
if len(s)==5:
   print('string has exactly 5 characters in it')'''

# WAP to check whether the number is greater than 200.
'''
n = int(input('Enter the number: '))
if  n>200:
   print('number is greater than 200')'''

# WAP to print the square of the number only if it is multiple of 3.
'''
n = int(input('Enter the number: '))
if  n%3==0:
   print('square of the number is: ',n**2)'''

# WAP to check whether the number is 2 digit number.
'''
n = int(input('Enter the number: '))
if  n>=10 and n<=99:
   print('number is 2 digit number')'''

# WAP to check if the character is Uppercase.
'''
ch = input('Enter a character: ')
if  'A'<= ch <= 'Z':
   print('character is Uppercase')'''
```

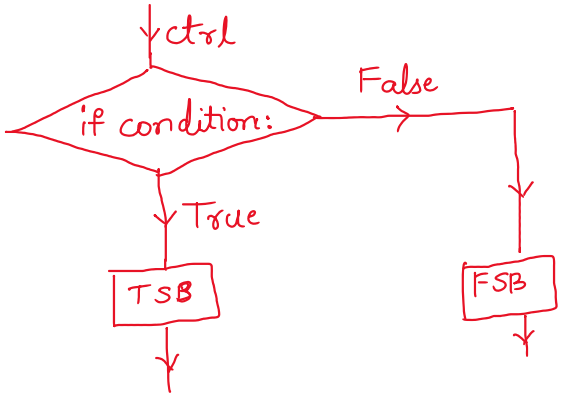
## 2) if else:

--- It is used to check the condition and it will execute the True Statement block if the condition is True else it will execute the False Statement block.

**Syntax:**




**Flow diagram:**




**Programs:**

```
# if else
```

```
# WAP to check the given data is float or not.
'''
data =  eval(input('Enter the data: '))
if  type(data)==float:
   print('given data is float')
else:
   print('given data is not float')'''


# WAP to check whether the string is palindrome or not.
'''
s = input('Enter the string: ')
if s==s[::-1]:
   print('string is palindrome')
else:
   print('string is not palindrome')'''

# WAP to check whether the given character is vowel or not.
'''
ch = input('Enter the character: ')
if ch in 'aeiouAEIOU':
   print('given character is vowel')
else:
   print('given character is not vowel')'''


# WAP to check whether the given data is SVDT or not.
'''
data = eval(input('Enter the data: '))
if  type(data) in [int, float, complex, bool]:
   print('given data is SVDT')
else:
   print('given data is not SVDT')'''


# WAP to check whether the given integer is 3 digit number or not.
'''
n = abs(int(input('Enter the number: ')))
if  100<=n<=999:
   print('given integer is 3 digit number')
else:
   print('given integer is not 3 digit number')'''
```

**Note:**

**abs (absolute function) -** It will convert the negative numbers into positive numbers. If we already have positive number it will keep as it is.

## Day-17

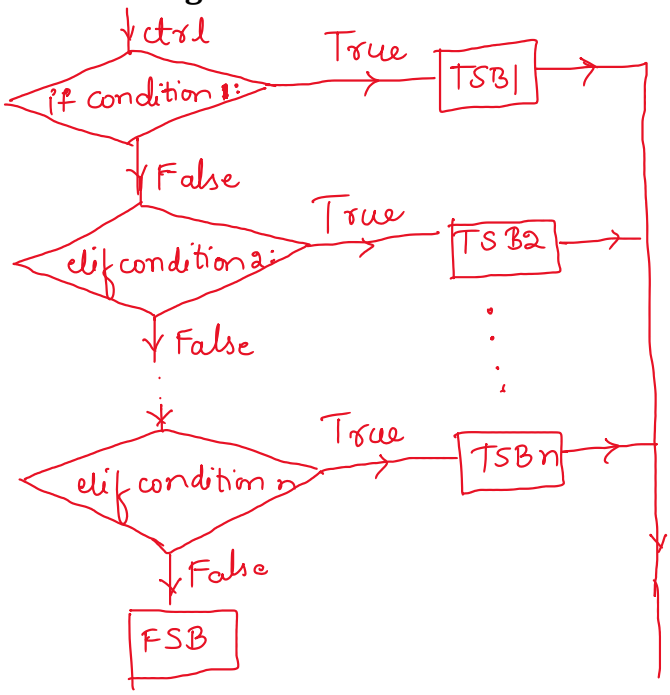
### 3) elif:

--- Whenever we want to check the multiple conditions and to execute statement blocks of each and every condition we use elif.

## Syntax:

```
if condition1:
    TSB1
elif condition2:
    TSB2
    .
    .
    .
elif condition n:
    TSB n
else:
    FSB
```

## Flow Diagram:




## Programs:

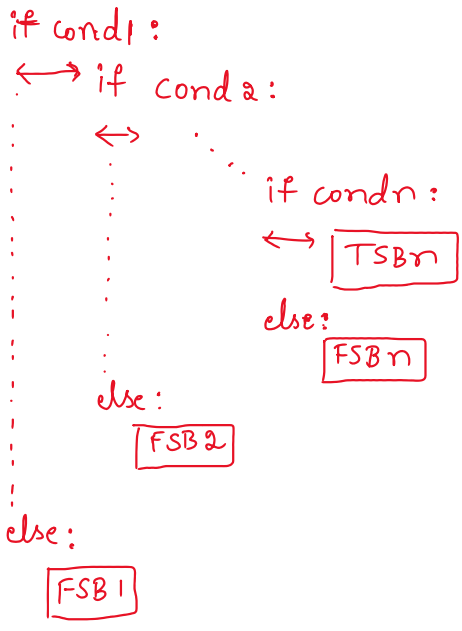
```
# elif

# WAP to find the relation between 2 numbers.
'''
a = int(input('Enter the number1: '))
b = int(input('Enter the number2: '))
if a > b:
   print(a, 'is greater')
elif a < b:
   print(a, 'is lesser')
else:
   print(a, b,'are equal')'''

# WAP to check whether the character is uppercase or lowercase or digits or special characters
'''
ch = input('Enter the character: ')
if 'A'<=ch<='Z':
   print('character is uppercase')
elif 'a'<=ch<='z':
   print('character is lowercase')
elif '0'<=ch<='9':
   print('character is digit')
else:
   print('character is special character')'''

# WAP to check whether the number is single digit or  two digit or three digit or more than 3 digit.
'''
n = abs(int(input('Enter the number: ')))
if 0<=n<=9:
   print('single digit')
elif 10<=n<=99:
   print('two digit')
elif 100<=n<=999:
   print('three digit')
else:
   print('more than three digit')'''
```

```
# WAP to find the greatest among four numbers
'''
a = int(input('Enter the number1: '))
b = int(input('Enter the number2: '))
c = int(input('Enter the number3: '))
d = int(input('Enter the number4: '))
if a>b and a>c and a>d:
   print(a,'is greatest')
elif b>a and b>c and b>d:
   print(b,'is greatest')
elif c>a and c>b and c>d:
   print(c,'is greatest')
else:
   print(d,'is greatest')'''

# Assignment:  WAP to find the smallest among four numbers

# WAP to predict the student result based on the obtained percentage.
'''
per = float(input('Enter the percentage: '))
if per < 0 or per>100:
   print('Invalid result')
elif 70<=per<=100:
   print('Distinction')
elif 60<=per<70:
   print('First Class')
elif 45<=per<60:
   print('Second Class')
elif 35<=per<45:
   print('Just pass')
elif per<35:
   print('Fail')'''
```

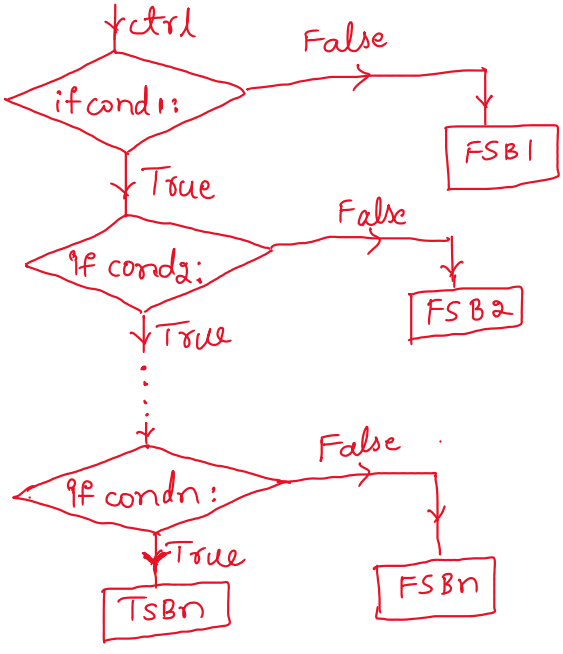
## 4) Nested if:

--- Whenever it is necessary to check a condition before checking another condition we use Nested if.

**Syntax:**




**Flow diagram:**



## Programs:

```
# Nested if

# WAP to check whether the given character is vowel or consonant.
'''
s = input('Enter the character: ')
if 'A'<=s<='Z' or 'a'<=s<='z':
   if s in 'aeiouAEIOU':
      print('Vowels')
   else:
      print('Consonants')
else:
   print('character is not alphabet')'''

# WAP to login to Instagram by entering the proper username and password.
'''
username = 'python'
password = 'coders@123'
un = input('Enter the username: ')
pw = input('Enter the password: ')
if un == username:
   if pw == password:
      print('Login Successful')
   else:
      print('Invalid password')
else:
   print('Incorrect username')'''

# WAP to print the greatest among 3 numbers
'''
a = int(input('Enter the number1: '))
b = int(input('Enter the number2: '))
c = int(input('Enter the number3: '))
if a>b:
   if a>c:
      print(a,'is greatest')
   else:
      print(c,'is greatest')
elif b>a:
   if b>c:
      print(b,'is greatest')
   else:
      print(c,'is greatest')'''
```